Field, Forest And Stream

Project Learning Tree Activity #48

Program of Studies

Science:

- S-P-SI-1(Ask simple scientific questions that can be answered through observations.)
- S-P-SI-2 (Use simple equipment (e.g., aquariums), tools (e.g., magnifiers, spoons), skills (e.g., observing, pouring), technology (e.g., video discs), and mathematics in scientific investigations.)
- S-P-SI-3 (Use evidence (e.g., observations) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- S-P-SI-4 (Design and conduct different kinds of simple scientific investigations.)
- S-P-SI-5 (Communicate (e.g., speak, draw) designs, procedures, and results of scientific investigations.)
- S-P-SI-6 (Question scientific investigations and explanations of other students.)
- S-P-ESS-3 (The Sun provides the light and heat necessary to maintain the temperature of the Earth.)
- S-P-LS-6 (Organisms' patterns of behavior are related to the nature of organisms' environments. There are many different environments (e.g., deserts, rainforests) on Earth that support different types of organisms.)
- S-P-AC-2 (Examine the interaction between science and technology.)
- S-4-SI-1 (Ask simple scientific questions that can be answered through observations combined with scientific information.)
- S-4-SI-2 (Use simple equipment (e.g., plant lights), tools (e.g., rulers, thermometers), skills (e.g., describing), technology (e.g., electronic media), and mathematics in scientific investigations.)
- S-4-SI-3 (Use evidence (e.g., descriptions) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- S-4-SI-4 (Design and conduct different kinds of simple scientific investigations.)
- S-4-SI-5 (Communicate (e.g., graph, write) designs, procedures, and results of scientific investigations.)
- S-4-SI-6 (Review and ask questions about scientific investigations and explanations of other students.)
- S-4-ESS-3 (Earth's materials have different physical (e.g., capacity to retain water) and chemical (e.g., ability to support plants) properties and provide resources that humans use.)
- S-4-ESS-4 (The Sun provides the light and heat necessary to maintain the temperature of the Earth.)
- S-4-LS-7 (Organisms' patterns of behavior are related to the nature of organisms' environments. There are many different environments (e.g., deserts, rain forests) on Earth that support different types of organisms.)
- S-6-SI-1 (Identify and refine questions that can be answered through scientific investigations combined with scientific information.)

- S-6-SI-2 (Use appropriate equipment (e.g., binoculars), tools (e.g., beakers), techniques (e.g. ordering), technology (e.g., calculators), and mathematics in scientific investigations.)
- S-6-SI-3 (Use evidence (e.g., orderings, organizations), logic, and scientific knowledge to develop scientific explanations.)
- S-6-SI-5 (Communicate (e.g., speak, write) designs, procedures, and results of scientific investigations.)
- S-6-SI-6 (Review and analyze scientific investigations and explanations of other students.)
- S-6-LS-**5** (Investigate factors (e.g., resources, light, water) that affect the number of organisms an ecosystem can support.)
- S-6-AC-1 (Examine the interaction between science and technology.)
- S-6-AC-2 (Recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.)
- S-8-SI-1 (Identify and refine questions that can be answered through scientific investigations combined with scientific information.)
- S-8-SI-2 (Use appropriate equipment (e.g., barometers), tools (e.g., meter sticks), techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations.)
- S-8-SI-3 (Use evidence (e.g., computer models), logic, and scientific knowledge to develop scientific explanations.)
- S-8-SI-4 (Design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-8-SI-5 (Communicate (e.g., write, graph) designs, procedures, and results of scientific investigations.)
- S-8-LS-4 (Investigate and analyze populations and ecosystems.)
- S-8-AC-2 (Examine the interaction between science and technology.)
- S-8-AC-3 (Recognize how science is used to understand changes in populations.)

Core Content

Science:

- SC-E-SI-1 (Ask simple scientific questions that can be investigated through observations combined with scientific information.)
- SC-E-SI-2 (Use simple equipment (e.g., magnifiers, magnets), tools (e.g., metric rulers, thermometers), skills (e.g., classifying, predicting), technology (e.g., electronic media, calculators, World Wide Web), and mathematics in scientific investigations.)
- SC-E-SI-3 (Use evidence (e.g., observations, data) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- SC-E-SI-4 (Design and conduct simple scientific investigations.)
- SC-E-SI-5 (Communicate (e.g., draw, graph, write) designs, procedures, observations, and results of scientific investigations.)
- SC-E-SI-6 (Review and ask questions about scientific investigations and explanations of other students.)
- SC-E-2.1.1 (Earth materials include solid rocks and soils, water, and the gases of the atmosphere. Minerals that make up rocks have properties of color, texture, and hardness. Soils have properties of color, texture, the capacity to retain water, and the ability to support plant growth. Water on Earth and in the atmosphere can be a solid, liquid, or gas.)
- SC-E-2.2.1 (The Sun provides the light and heat necessary to maintain the temperature of Earth. The Sun's light and heat are necessary to sustain life on Earth.)
- SC-E-3.1.1 (Things in the environment are classified as living, nonliving, and once living. Living things differ from nonliving things. Organisms are classified into groups by using various characteristics (e.g., body coverings, body structures).)
- SC-E-3.3.2 (The world has many different environments. Distinct environments support the lives of different types of organisms. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.)
- SC-E-AC-1 (Distinguish between natural objects and objects made by humans and examine the interaction between science and technology. Technology (e.g., thermometer, hand lens) is used to study science, while science provides theories for technology. Science is used to design simple technological solutions to problems (e.g., use understanding of heat transfer in designing an insulated container for ice cubes).)
- SC-M-SI-1 (Refine and refocus questions that can be answered through scientific investigation combined with scientific information.)
- SC-M-SI-2 (Use appropriate equipment, tools, techniques, technology, and mathematics to gather, analyze, and interpret scientific data.)
- SC-M-SI-3 (Use evidence (e.g., computer models), logic, and scientific knowledge to develop scientific explanations.)
- SC-M-SI-4 (Design and conduct scientific investigations.)
- SC-M-SI-5 (Communicate (e.g., write, graph) designs, procedures, observations, and results of scientific investigations.)
- SC-M-SI-6 (Review and analyze scientific investigations and explanations of other students.)
- SC-M-1.3.4 (The Sun is a major source of energy for changes on Earth's surface. The Sun loses energy by emitting light. A tiny fraction of that light reaches Earth, transferring energy from the Sun to Earth.)

- SC-M-3.5.4 (The number of organisms an ecosystem can support depends on the resources available and abiotic factors (e.g., quantity of light and water, range of temperatures, soil composition). Given adequate biotic and abiotic resources and no diseases or predators, populations (including humans) increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystem.)
- SC-M-AC-2 (Describe the individual's roles and responsibilities in the following areas: changes in populations, resources and environments including ecological crises and environmental issues, natural hazards, science and technology in society, and personal and societal issues about risks and benefits.)
- SC-H-SI-2 (Use equipment, tools, techniques, technology, and mathematics to improve scientific investigations and communications.)
- SC-H-SI-3 (Use evidence, logic, and scientific knowledge to develop and revise scientific explanations and models.)
- SC-H-SI-4 (Design and conduct different kinds of scientific investigations.)
- SC-H-SI-5 (Communicate and defend the designs, procedures, observations, and results of scientific investigations.)
- SC-H-AC-2 (Explore the impact of scientific knowledge and discoveries on personal and community health; recognize how science influences human population growth, use science to analyze the use of natural resources by an increasing human population; investigate how science can be used to solve environmental quality problems, use science to investigate natural and human-induced hazards; and analyze how science and technology are necessary but not sufficient for solving local, national, and global issues.)